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CURRENT AGRICULTURAL DILEMMAS
IN GABON

Africa and Middle East Branch

March 1981

International Economics Division • Economics and Statistics Service • USDA

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International Economics Division
Economics and Statistics Service
U.S. Department of Agriculture

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ABSTRACT

In Gabon, revenues generated by thriving mineral, petroleum, and timber exports have produced a modern urban sector which contrasts with a countryside almost devoid of infrastructure and drained of people, especially young people. The result is that Gabon has the second highest per capita income in Africa and probably the least developed agricultural sector. This structure poses problems for the Government of Gabon, which is trying to develop large-scale, mechanized production in capital-intensive projects in the face of cheaper food imports, and at the same time attempting to launch a rural development program to overcome twenty years of neglect.

Key words: Gabon, agriculture, food demand, food production, technology, market demand.

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INTRODUCTION

For twenty years, agriculture has been a low-priority sector in Gabon, in contrast with much of the rest of Africa. While attention was focused on the country's timber, mineral, and lately petroleum sectors, agriculture slipped into neglect as it contributed a lessening share of gross domestic product and export earnings. Today, however, with depletion of Gabon's oil reserves in view, agriculture has again come to prominence. The country at present faces very real problems of agricultural investment policy and development. This report is intended to provide background information on these problems and to suggest some possible steps to solutions.

The occasion of a three-week visit to Gabon by a four-member study team financed under Section 661 of the Foreign Assistance Act provided the materials on which the report is based. The mission resulted from Gabonese interest in United States investment (private or public), technology, and expertise for the agricultural sector. President Bongo, in correspondence with U.S. Ambassador Tienken, expressed an interest in U.S. assessments of the potential for expansion of rice and peanut production and cattle raising in Gabon, with an emphasis on U.S. participation in implementing recommended actions. The U.S. Department of Agriculture and the Trade and Development Program of the U.S. International Development Cooperation Agency responded by arranging a prefeasibility study.

The team visited Gabon for three weeks in September and October of 1980, and submitted its findings in the form of a report, in English and French, in December. Team members were Arthur J. Dommen, agricultural economist, leader; Carl E. Ferguson, agronomist; Nadine Horenstein, economist; and Hans J. Seyffert, veterinarian. Marc Cohen, OICD, provided valuable research assistance. The present report is the product of the entire team.

OVERVIEW

The Republic of Gabon is an example in its purest form of an African enclave economy. The large resources generated by thriving mineral, petroleum, and timber exports have produced a modern urban sector which contrasts sharply with a countryside largely devoid of infrastructure, while a high demand for labor has drained the rural sector of people, especially young people. The result is that Gabon has the second highest estimated per capita income in Africa (\$3,580 in 1978, ranking Gabon just after Libya with \$6,910), and what is possibly the least developed agricultural sector. 1/

Recent Trends

The Government of Gabon (GOG) has recognized, at least since 1972, that its exploitable natural resources are finite, and that recoverable oil reserves, especially, will soon be depleted. There has been increasing verbal emphasis on rural development in general and on food production in particular in order to reduce the country's growing dependence on imported food stuffs. Over recent years, the relative affluence of the urban areas (Libreville and Port-Gentil in particular, and to a lesser extent, Franceville) and the presence there of large numbers of foreigners have meant that sophisticated and expensive tastes have developed among the Gabonese. Hence, meat, rice and processed foods of all kinds have been imported in sizeable amounts for the urban population, while the rural areas have continued to live from their own production of traditional foods, such as manioc, yams, cocoyams, and plantains supplemented by hunting. Approximately 90 percent of the urban food supply is imported.

Government policy, as set forth in the 1976-80 Five Year Development Plan (abandoned in 1979) and drafts of the 1980-82 Interim Development Plan

1/ World Bank, World Development Report, 1980. Note that this figure has been increased significantly as a result of OPEC price increases in 1979 and 1980.

(not officially published at the time of writing), has been to diversify and commercialize agriculture, in order to reduce import dependence, to promote greater balance in the oil-dominated economy, to stem the exodus from the rural areas, and to achieve greater social equality. The results have not been spectacular thus far, particularly as resources earmarked for agriculture under the Five Year Plan were, on a massive scale, transferred into urban construction and beautification in preparation for the 1977 Organization of African Unity (OAU) summit conference in Libreville.

The steep increase in producer prices of oil in 1973-74 led to an economic boom and spending spree. When the GOG eventually added up all its credit notes it found itself deeply in debt. The years since 1977 have seen the imposition of austerity measures, with the result that a large measure of financial solvency has now been restored, and a \$100 million loan was signed with a consortium of banks in March 1980. The terms of the loan were an eight-year repayment period and interest at 1.5 per cent over Libor with payment at six-month intervals. The loan money (none of which has yet been drawn as of the time of writing) may be used by the GOG for any investment project in the government's investment budget, including agriculture, a concrete proof of the GOG's financial soundness.

The GOG is becoming acutely aware that the revenues from exploitation of the country's mineral, oil, and timber resources will not flow forever, and as a result has been trying to find ways to reinvest such revenues in agricultural production against the day when food imports may again become a luxury. The choice of such investments in agriculture, under present economic conditions, is not an easy one.

Geography and Demography

Gabon straddles the equator on the Atlantic coast of Africa, just south of the Gulf of Guinea and the Bight of Biafra. It lies between 8°45'E and 14°30'E longitude, and is bordered by Equatorial Guinea and the United Republic of Cameroon on the north, and the People's Republic of the Congo on the north, east, and south (see map). The land area is 102,317 square miles (267,700 square kilometers), with 550 miles (800 km) of coastline.

The climate is of the Guinean forest type, with annual rainfall ranging from 64 inches in the south to approximately 120 inches in the Libreville area. Temperatures range from 65°F (18°C) to 77°F (25°C) in the dry season, and from 86°F (30°C) to 93°F (34°C) in the rainy season. The rhythm of the season is approximately as follows: May to mid-September, long dry season; mid-September to mid-December, short rainy season; mid-December to January, short dry season; and February to late May, long rainy season. Rainfall occurs primarily at night, and relative humidity averages 80 to 85 percent throughout the year.

Almost 85 percent of Gabon is covered with tropical rain forest, with the southwestern and southeastern savanna areas accounting for about another 15 percent of the area. Most of the land area is plateau; on the northern, southern, and southeastern borders, there are mountains, with elevations of up to 5000 feet. The coastland lowlands, forested like the plateau, but with elevations of no more than 1000 feet above sea level, extend well inland and feature beaches, lagoons, and mangrove swamps.

The Ogooué River, the largest on the African coast between the Niger and the Congo, drains most of Gabon, and is navigable 150 miles (250 kilometers) inland. Its major tributaries are the Ivindo and Ngounié; the other principal rivers are the Nyanga in the south, and the Como, which empties into the estuary of Gabon, in the north.

Accurate data on the population of Gabon are hard to come by. This is due to the lack of adequate transportation in the rural areas, which hampers the taking of a census; the relatively large and transient foreign community; and the Gabonese government's pro-natalist policy, which promotes both an increased birth rate and inflated statistics. Thus, in 1976, the GOG claimed a population of 1.2 million, and a 4.3 percent growth rate since 1970, while the World Bank's estimate in 1973 was 520,000. The U.S. State Department gives a figure of 550,000 in 1976, with a growth rate of only 1.7 percent. The American Embassy in Libreville estimated the population as 660,000 two years later. The OAU estimated a somewhat lower figure of 544,000 in 1978: the Africa Research Bulletin accepts the 550,000 to 600,000 as of January 1980, while the equally respected Africa South of the Sahara saw the government figure of 1972, 950,000, as accurate. All this leaves the observer with the uncertain impression that the current Gabonese population is somewhere between one figure and another figure that is double the first. Nevertheless, even accepting the highest figure of all, (the official estimate) we obtain a figure of 1.42 million for 1980. That means a population density of about 14 persons per square mile, which is still exceedingly low for a developing country. If the official population growth of 4.3 percent is accepted, there will be dramatic implications for the future level of food imports. A new census has been underway since August 1980.

Whether Gabon's population is 550,000 or 1.4 million, one striking feature is the ethnic diversity, with over 40 different native Gabonese peoples. The most numerous of these are the Fang, the Eshira, the Bapounou, the Batéké, the Okandé, the Bandjabi, the Mpongvé, the Myéné, the Massango, the Mitsogho, the Obamba, and Pygmy peoples. Altogether, native peoples accounted for 95 percent of those resident in Gabon in 1977. Another 2 percent at that time consisted of workers from other African countries including Cameroon, Senegal, Togo,

Nigeria, and Benin. This group declined somewhat during the recession years of 1977 and 1978, and workers from Benin were expelled in 1978 as Gabon's relations with that country soured. However, these trends were somewhat counteracted by influxes of refugees, mainly from neighboring Equatorial Guinea. The rest of the population includes a group of Lebanese and Syrians, who are engaged in commerce, and a substantial European group, which is overwhelmingly French. At present, there are more French nationals (30,000 in 1977) in Gabon than there were during colonial times, and the financial, economic, military, and political weight of France in Gabonese affairs is considerable.

Other salient characteristics of the Gabonese population are its youth and its urban orientations. In 1977, it was estimated that 55 percent of the population was 25 years old or less, with only 8 percent older than 60. Estimates of the urban population are as high as 60 percent of the total. The GOG's figure for the annual rate of urban population growth is 9 percent, although the French Ministère de la Coopération sees 5.1 percent as more realistic, which is still considerable. Younger males, especially, leave the countryside, increasing the proportion of women in the rural population. The major urban centers are the capital, Libreville (about 150,000, and Port-Gentil (about 55,000) both on the Atlantic coast; and Franceville in the interior (about 15,000).

Although medical facilities in urban areas are among the best in Africa, health conditions in rural Gabon are generally poor. Average life expectancy is 44 years, the sixteenth lowest in Africa.^{2/} There is little public health effort in rural areas. Drinking water is usually unsafe. The infant mortality

^{2/} Population Reference Bureau, 1980 World Population Data Sheet (Washington, D.C. April 1980).

rate is high, although precise data are lacking. The prevalent system of weaning at three months directly onto the customary manioc-dominated diet produces a severe shock in infants (who are not fed eggs in some regions because of a popular belief it would induce stealing).

Gabon's high per capita income disqualifies the country from receiving in-country development aid from the Agency for International Development. The Peace Corps, however, has an active program in Gabon.

Christianity is the dominant religion. The Islamic minority of less than 1 percent of the population is important, however, for it includes the President of Gabon, El Hadj Omar Bongo.

Gabon lacks an adequate transportation system. The Transgabon railroad has been on the books since 1967, but only 185 kilometers had been completed 11 years later, despite the priority given to the project in absorbing budgeted funds for development. The Franceville railroad was not scheduled to be reached until 1985. At the same time, Gabon has few all-weather roads, and existing roads have been poorly maintained, as resources have been diverted elsewhere. The result has been a reliance on air links between regional centers, despite the high costs of air transportation. River navigation is also important, but offers limited expansion possibilities. This situation hampers rural development and diversification, and makes the government's goals of improving rural living standards and keeping people in the rural areas exceedingly difficult to reach.

Economy

Gabon's economy is a laissez-faire economy of the French type, with the government exercising an indicative planning role at the top and intervening at the bottom through a mass of regulations.

The exploitation of Gabon's forests of hardwoods and softwoods accounted for three-fourths of all exports until 1963. In particular, the export of the wood of the okoumé, a tree species valuable for the manufacture of plywood, found a ready market abroad. In the 1970's, however, decreased world demand, competition from Southeast Asia, lack of transportation into the interior of Gabon, and losses due to logs floating out to sea led to a certain amount of stagnation in this sector. It accounted for 7 percent of exports in 1977.

The mining sector, consisting primarily of oil exploitation, is presently at the core of the economy. Oil, manganese (of which Gabon has 25 percent of the world's reserves) and uranium together accounted for 43 percent of the GDP, 85 percent of exports, and 60 percent of government revenues in 1978. In 1974, the quadrupling of world oil prices led to a doubling of the Gabonese GDP. However, since 1975, oil output has been declining. On the other hand, major iron ore reserves remain untapped, due to the lack of means of transportation.

Manufacturing accounted for 4.3 percent of GDP in 1977, with processing of petroleum and timber most important. Government policy in recent years has emphasized the cultivation and processing of industrial crops, and the integration of the processing of agricultural products and livestock raising; however, results have been modest. Until very recently, manufacturing was overwhelmingly concentrated in Libreville.

Prior to the post-OAU conference recession, construction accounted for sizeable proportion of GDP: 20 percent in 1976 and 16 percent in 1977. However, the figure was only 7 percent in 1978.

Agriculture, animal husbandry, and fishing have accounted for only 4 percent of GDP in recent years, as seen in table 1.

Table 1--Share of agriculture, animal husbandry, and fishing in GDP, 1973-78.

1973	4.6%
1974	4.4%
1975	4.5%
1976	3.3%
1977	4.1%
1978	4.2%

Source: IMF

Nineteen-seventy-nine marked the first time in three years that the Gross Domestic Product (GDP) of Gabon registered growth. The growth rate was a healthy 11 percent, with a total GDP of \$2.8 billion. The inflation rate was 9 percent annually in 1979.

Since June 1972, workers in the agricultural and non-agricultural sectors have been guaranteed a uniform minimum wage (salaire minimum interprofessionnel garanti, commonly referred to as the SMIG). This was set at CFAF 10,000 per month during the period June 1972 through January 1973. In February 1973 the SMIG was increased to CFAF 10,500 per month, and in February 1974 it was raised further to CFAF 17,500 per month. Thereafter, it was kept unchanged until January 1977, when it was raised to CFAF 23,000 per month. In August 1977 it was increased to CFAF 30,000 per month. On January 1, 1980, the SMIG for Gabonese nationals was increased to CFAF 40,000 per month: this is approximately equivalent to US\$2,400 per year. 3/

The cost to employers in the private sector of wage labor is higher than this, however. All wage earners in the private sector are covered by the social security provision of the Caisse Nationale de Sécurité Sociale (CNSS). The social security system, financed by contributions from employers and employees, provides workers with family allowances, maternity benefits, medical and accident compensation, and pension benefits. These charges, together with legally required employer contributions to worker's unions and the PDG, and

3/ For purposes of comparison, agricultural labor in Cameroon is paid at CFAF 15,000 per month.

miscellaneous charges mean that private employers pay out about 130 percent of workers' net take-home pay.

Gabon joined the Organization of Petroleum Exporting Countries (OPEC) as an associate member in 1973, and achieved full member status in 1975.

The Agricultural Sector

In Gabon, there are in reality two agricultural sectors. The first is the traditional farming sector, in which slash-and-burn cultivation of manioc, taro, cocoyams, bananas, plantains, and other crops is the rule. Techniques in this sector have barely changed for centuries, the hand hoe being the main implement (animal traction being virtually unknown because of disease problems). Production is almost entirely for home consumption, with small amounts of surplus being offered for sale, often on small tables along the roadside to attract passersby. There is a small trade by private merchants, who load up trucks and sell in urban markets; their business is always subject to the happenstance of weather and mechanical breakdowns on the laterite roads, which are often washed out and sometimes impassable for days at a time.

In addition to subsistence crops, cocoa and coffee have a tradition as cash crops in some areas; they are grown by smallholders and sold for cash and find their way into export markets. Marketing circuits for cash crops seem to be relatively well organized, and a system of guaranteed prices to producers provides an important incentive. Peanuts are also sometimes a cash crop.

The second sector comprises a relatively small number of large-scale, heavily mechanized commercial crop operations and cattle-raising operations, all of very recent vintage. These include notably the plantain plantation at Ntoum, the oil palm plantation at Lambaréne, the Nippon Koei rice project at Ndendé, the maize-soybean-poultry project at Boumango, the sugarcane complex at Franceville, and the cattle ranch at Mounana (see map). All these operations depend heavily on expatriate management, some of them from the top on down to

mechanics imported on a seasonal basis from France. All are users of imported inputs such as machinery, fertilizers, and chemical products. All seek to reduce the employment of local labor to a minimum in order to achieve cost-effectiveness.

Women perform a major share of the work in the traditional sector and are also important participants in more modern farming sector. Women also have responsibility for the processing of traditional foods and are active in the market place.

AGRICULTURAL PLANS AND ACTIONS

In the fifteen years after independence, the GOG's commitment to agriculture was characterized by limited financial flows and general neglect. Mining, petroleum and infrastructure were the primary areas of interest serving to promote rapid, albeit unbalanced, growth. Few linkages were apparent between the dynamic export-oriented sectors based on the exploitation of mineral resources, and the traditional, rural sector, which was left in isolation.

Content of Plans

During the first Five Year Plan (1966-1970) a scant CFAF 1 billion (or 1/52nd of the budget) was allocated to agriculture. In contrast, the mining sector received CFAF 48 billion during the same period. Similarly, agriculture received less than 2 percent of total investment during the second Five Year Plan (1970-1975). The results of this neglect are well documented. The un-coordinated approach to rural development coupled with minimal financial assistance deepened the cleavage between urban and rural areas and further isolated the latter from the mainstream of economic activity. The rural exodus was intensified as the active members of the population fled to the cities in search of more remunerative employment and a perceived higher standard of living. Accordingly, an already low level of food production fell even lower and urban centers suffered temporary shortages despite rapidly rising imports.

In 1975, a colloquium on agriculture was organized in an attempt to focus on the major problems of the sector and to suggest ways of redressing the alarming situation. The Third Development Plan covering the five-year period 1976-1980 was a first attempt at a concrete policy initiative in the agricultural sector. Investments for agriculture were substantially increased and priorities more clearly defined. However, economic austerity measures introduced in 1978 at the instigation of the International Monetary Fund resulted in a dramatic drop of public investment outlays. The following year the Plan was abandoned due to increased financial difficulties.

The Three Year Interim Plan covering the 1980-1982 period is the government's latest and most serious attempt to restructure and motivate agricultural development. The recognition that the country's petroleum and other mineral resources are finite has given impetus to this attempt. Indeed, the sector is seen as a crucial component of long-term, self-generated development which could survive after the mineral resources have been depleted.

Three - Pronged Action

In order to augment food crop production, promote rural development (and thus decelerate the rural exodus), and increase the value added to agricultural exports, the Interim Plan foresees three types of investment in the agricultural sector. Projects (Fr. actions ponctuelles) characterized by the establishment of agro-industrial blocs (Fr. blocs agro-industriels) will be the primary means to increase production on a large scale and to create a rural salaried work force. These complexes for agricultural production on an industrial scale will produce both food crops (for example rice and bananas) and cash crops (for example hevea rubber and oil palm). Secondly, extension-type activities (Fr. actions diffuses) will seek to develop and increase the productivity of traditional small-farmer agriculture. Emanating from and closely tied to these actions is a third type of investment, the opérations zonales intégrées, to integrate

the agro-industrial activities and the more traditional farmer oriented activities. The objective is to create integrated zonal development projects which can provide the framework for regional development through the provision of a wide range of sector supporting services and through the development of appropriate administrative and physical infrastructure.

In pursuit of these goals, the Interim Plan has allocated CFAF 33.6 billion to the agriculture sector which is to be divided between the actions ponctuelles or agro-industrial activities (57 percent), the integrated zonal development project (39 percent) and the farmer level actions diffuses (4 percent).

Investments for some agricultural sector supporting services such as roads are included with in the opérations zonales intégrées. The bulk of the investment in road construction and maintenance however, is funded separately. The Interim Plan has allocated over CFAF 50 billion to this crucial sector. The Transgabon railroad continues to receive the major portion of transportation investments. The CFAF 118.1 billion allocated to railroad construction during the Interim Plan amounts to one third of the total investment budget.

In its quest for greater self-sufficiency in foodstuffs, the GOG is paying particular attention to rice production and cattle raising. At present, domestic production of rice and meat is marginal with imports providing 90 percent or more of total consumption. During the Interim Plan, and presumably beyond, half a dozen projects concerning rice production will be pursued. Investments are currently of both an agro-industrial and farmer-level nature. In addition, a rice component is envisaged in an integrated zonal development project.

In the area of cattle raising, substantial investments are planned for the continuation or initiation of projects. Two large ranches aim at stocking 45,000 head of cattle by 1990. A large integrated project concerning the production of confectionary peanuts and the production and processing of

oil-bearing peanuts is under consideration in the Lébamba region. The purpose of this project will be threefold: to increase the productivity and revenues of small farmers, to create an agro-industrial bloc and resulting salaried work force, and to promote the import-substitution of cooking oil.

In addition to investments in other fruits, vegetables, and rootcrops, the Interim Plan has allocated substantial funds to the expansion of cash crop production. Activities currently underway include a sugar project (CFAF 17 billion), a hevea rubber project (CFAF 26 billion), and an oil palm project (CFAF 14 billion).

DEMAND FOR FOOD

Inaccurate and variable population data, unreliable production figures and substantial migration combine to complicate the estimation of the demand for food in Gabon. It is clear, however, that the demand for food is growing rapidly as evidenced by the dramatic increase in imports. In 1978 (the latest year for which figures are available), the country's food and agricultural import bill reached CFAF 25.3 billion, more than twice that of 1975. Since Gabon imports some 90 percent of its food needs, this serves as a good indication of total demand.

Consumption Patterns

Rapid increases in the demand for certain foods in recent years appear to be connected with urbanization and income growth. Estimates of the proportion of urban to total population reach as high as 60 percent. Private consumption expenditure increased between 1974 and 1978 at an annual rate of 23.1 percent at current prices, an annual rate of 7.2 percent at constant 1973 prices. Rising incomes and changing tastes and preferences associated with urban life have given impetus to a seemingly voracious urban demand for non-traditional food whose domestic production is marginal or non-existent.

Rice and meat are prime examples of products for which demand has been rising rapidly. In 1975, an estimated 4,500 tons of rice were imported. In

1980, it is probable that over 10,000 tons were imported. Similarly, between 10-12,000 tons of meat are now being imported annually, compared to half that amount in 1975. Although there is little first-hand information on urban consumption patterns and the relative importance of different foodstuffs, estimates of these imports (which are destined almost exclusively for urban centers) clearly indicate the importance of rice and meat in the urban diet.

Clearly, not all the urban population consumes large amounts of rice, meat and other imported foodstuffs. There are likely to be differences in consumption patterns between Gabonese, other Africans and other nationals (predominantly European). There will also be variations according to income and ethnic group. Recent arrivals from rural areas are not likely to substitute rice for manioc automatically. The lively traditional Mont Bouet market in Libreville attests to the continued importance of manioc and plantains in the Gabonese diet.

Consumption patterns in urban areas are also affected by the nature of urban lifestyles. There is often a premium put on foods whose preparation time is relatively short. Rice has thus gained tremendous importance in urban centers at the expense of more traditional foods such as manioc and plantains. The preparation of manioc for example, from its root form to the "bâton de manioc" 4/ takes five days. Research and practical application concerning the processing of manioc to reduce preparation time and increase conservation is currently being undertaken by consultants to the FAO. If successful, this research could increase the marketability and shelf-life of a traditional and still popular food. There is probably a certain prestige associated with imported foods--a factor which may play an important role in the changing structure of demand.

4/ Literally a stick cooked, gelled, of manioc starch weighing between 500 and 800 grams which is wrapped in leaves.

In addition, urban consumption of certain imported foods such as rice may be encouraged by the price relationship between the latter and some traditional foods. Even if production of certain foodstuffs is sufficient in the aggregate, the inadequacy of the transportation and marketing system results in temporary shortages and high prices in urban areas. Such is the case with plantains, whose price reaches as high as CFAF 1,500/kg. 5/

Rural consumption patterns are largely based on traditional foods, primarily manioc, cocoyam, yam, and plantains. A 1975 report by SATEC on food problems in Gabon gave estimates of per capita consumption annually in rural areas: 340 kg of roots and tubers, 170 kg of plantains and marginal quantities of other foodstuffs. In addition, some amounts of game are consumed including monkey, antelope, and wild boar. As such, rural populations are largely self-sufficient, although they do have access to some imported foodstuffs through the extensive retail outlet network. This contrasts sharply with urban demand, which for many commodities is exclusively satisfied through imports.

Retail Policies

The GOG does not have a coordinated set of retail policies. At present it appears that if the consumption of imported goods is not being encouraged, it is certainly not being discouraged. A wide range of imported foodstuffs are available in the large supermarket and smaller shops in Libreville, albeit many at high prices. Prices of rice and meat, however, do not appear to be inordinately high. As mentioned earlier, rice is often less expensive than certain traditional foods. Until January 1980, the GOG was subsidizing the price of imported meat. Even now, however, beef prices are relatively low and supplies ample.

5/ Given the paucity of food demand and supply data it is possible that there is an over-production of plantains. The GOG is currently considering stopping further expansion of the Ntoum plantain project.

The GOG makes an effort to control retail prices by use of guidelines known as the mercuriale. The prices that figure in the mercuriale bear little resemblance to actual prices. The prices in the mercuriale bear little relation to the rate of inflation and are apparently decided upon purely on consumer interest grounds.

Prices in the local traditional market in Libreville (Mont Bouet) are fairly uniform among sellers and there is little haggling between buyers and sellers. The market carries many foodstuffs which are generally unavailable in the modern supermarket. However, it was interesting to note that for certain items carried by both outlets (such as rice, and certain fruits or vegetables), the supermarket price was cheaper. We were told that the market women often buy at the supermarket and resell at higher prices at the traditional market.

There are now several projects in the Libreville and Port-Gentil areas concerning the production of fruits and vegetables. However, there does not seem to be ease of entry into the market both due to poor internal transportation and marketing arrangements as well as vested interests by large import firms in continuing to import from overseas.

SUPPLY OF FOOD

The problem facing Gabon is the problem of combining the physical, human, and financial resources which the country possesses in a more rational manner for meeting the country's demand for food. The manner in which these resources are presently organized results in a large outflow of financial resources for imported food while productive physical and human resources in the rural sector are seriously underutilized. The problem of raising agricultural production is beginning to be posed in an urgent way.

Policy Issues

One of the points in the debate over the future course of agriculture is whether the government or the private sector can better combine the country's resources to increase productivity. But there is as yet no agreement on the particular combination that will best meet the country's needs. Here, the GOG is caught in a tug of war between its inclination towards laissez-faire in economic affairs and its realization that laissez-faire has resulted in the wage-price spiral of the past decade, which has contributed to the decadence of the agricultural sector and the unreliability of the food supply. The ambiguity of the state's role is manifested by the fact that the primary responsibility for setting up the agro-industrial blocs on which the GOG counts heavily for reversing its present outside dependence for food has been entrusted to a series of para-statal organizations. (See List of Acronyms) These are profit-making concerns organized along the lines of business firms, but each is placed under the control of a government ministry. GOG personnel directly fill the top positions on the board, but actual operations are decided by expatriates who fill positions from Director on down to mechanics.

More fundamental to Gabon's prospects for agricultural development, however, is the fact that there exists as yet no agreement on the particular combination of resources that will best meet the country's food needs. 6/ The planning documents issued under the imprimatur of the Ministry of Plan consist largely of general goals coupled with lists of projects. They give very little idea of how investments in agricultural enterprises are to be linked up with transportation systems, either existing or planned, so as to ensure orderly marketing of product; how government import policies will be designed to facilitate the entry of the many inputs needed if the planned investments in agro-industrial blocs are to go forward to fruition;

6/ See "Which Type of Production?", below.

what sort of pricing policies are to be applied to domestic production and imports; and many other important, indeed vital, aspects of the path of the economy in years ahead. The distinct impression is that at the present time policies in these important fields are still tailored to the needs of individual projects on which the GOG is pinning its hopes, and are predicated on the benevolence of the Minister of Finance. This makes predicting the future outlook very risky. Projects will certainly be going forward, and while many may fail, some may succeed and survive; the waste of resources in this process will no doubt be enormous. It should be added, however, that this state of affairs is caused by many factors. There are relatively few Gabonese who have received appropriate training in economic planning, and much of the planning work is in the hands of expatriate advisers, mainly French, who people the Ministry of Plan.

Historical Perspective

The fact that Gabon's agricultural sector has not merely stood still in the two decades since independence while government attention was focused elsewhere, but has actually deteriorated is eloquently documented in a confidential report prepared by the Ministry of Agriculture summing up the present situation. 7/ The report states that under the colonial regime a small but well designed export crop sector produced coffee, cocoa, groundnuts, rice, and pepper. Cocoa production was of a high quality; for instance, the 1957-58 crop graded 73 percent superior, 22 percent middling, and 5 percent inferior. Among the achievements of the colonial regime were the establishment of an agricultural training school (Centre de Formation Professionnelle Agricole) at Oyem, and of a training school for veterinary nurses (Ecole d'Infirmiers-Vétérinaires) at Ndendé.

The agricultural situation was then characterized by an extension service that was adequate for the task, both in terms of its training and in terms of its density at the lower echelon. It spread all the way from the top down to the

7/ "Rapport de Synthèse sur l'Analyse de l'Agriculture Gabonaise," Note Circulaire No. 000232/MAEFDR/CAB du 20 mars 1980.

villages, with here and there stations and groups of agricultural producers who knew a certain prosperity. On the equipment side, each regional chief, each sector chief, the crop specialists, the extension agents, and their workers were all housed, and often better than the personnel of other services. They all had appropriate means of transportation: cars, motorbike, bicycles, canoes.

The result of this field presence was (1) the high prestige in which the agricultural services were held by the rural population; and (2) the rush to enter the agricultural career services. To ensure the accomplishment of its mission, the extension service was provided with adequate financial means to carry on its work, and notably for (1) free distribution of plant materials, tools, and so forth; (2) introduction of trypano-tolerant cattle (N'Dama, Lagune, Baoulé) in the agricultural stations and for distribution to farmers (the métayage system); and (3) establishment of pilot farms.

Distribution was handled efficiently by the Sociétés Indigènes de Prévoyance, then by the Sociétés Africaines de Prévoyance. These were administered by the agricultural services. The products were purchased and stored in storage places built of durable materials, from the village to the factory or warehouse whence they were exported. Every producer received the income from the sale of his product.

8/

The Research Base

Unlike many of the other French African colonies, Gabon never possessed any large-scale agricultural production operations, such as plantations. For this reason, the country entered independence without a base of fundamental knowledge about agriculture in its particular conditions of climate, soils, fauna, and flora. Today there is no functioning national agricultural research station in Gabon. This means that agricultural projects, especially those envisaging drastic changes in the environment and introduction of new plant types or livestock

(i.e. the agro-industrial blocs), must proceed by trial and error. The team observed at first hand several examples of this.

Large-scale agricultural projects involve the clearing of land, and in the case of Gabon this means clearing either forest or savanna vegetation. Universal experience in Gabon is that the clearing must be done very carefully in order to avoid serious problems with generally fragile soils. At the Ntoum plantain plantation, where forest was cleared by bulldozers beginning in 1977, accidental damage resulted when a temporary replacement bulldozer operator set the blade of his machine too low and the thin, humus-bearing topsoil washed away in the first rain.

In the forest environment with its dense shade, disease and pests abound. Nematodes, borers, and other pests seem to have a permanent habitat in the forest, and as soon as clearings are made and new monocultures are established, they thrive and multiply. Only strict control measures can reduce crop losses. The same principle, of course, applies to livestock, where nearby water courses are the natural habitat of disease-bearing organisms. There exists no detailed map of Gabon showing incidence of tse tse fly.

A black fungus (cercosporiosis) which has been plaguing the Ntoum plantation is thought by some to have been introduced to Gabon in rice seeds brought in by the Chinese in the 1960's. Only by diligent spraying with a petroleum-base spray can the disease be controlled. This project, like others, has to do its own research, with rudimentary facilities, and find ways to defend its crops against diseases and pests, with the help of occasional visits by specialists from Europe or elsewhere in Africa.

Sometimes lack of prior knowledge about the environment in Gabon can prove costly for projects. The managers of the Ntoum plantation found after installation

of the plantation that they had to irrigate their plantains for a full four months of the year. This led to the construction of a small dam on a nearby stream and the construction of a pumping station with associated equipment. Since the land is fairly rolling, one is led to wonder whether they would not have picked another, flatter site if they had been able to foresee the need for irrigating.

In the absence of a national agricultural research program, the most systematic work going forward in this field at the present is that at the CIAM project in Ntoum, with FAO technical assistance. Here, at a station used by IRAT in 1969-70 and then abandoned, fruit, vegetable, and cereal varieties are being planted on a trial basis and performance evaluated. Plant cultivars have been distributed on a low-cost basis to farmers in the surrounding area since 1975, and some have been sent for tests elsewhere in Gabon. Varieties tested include cowpeas, sweet potatoes, and upland rice from IITA, and citrus from California. A cooperative of 25 garden farmers has been established on a site adjacent to the station, and farmers have received loans from the Caisse Nationale de Développement Rural.

Infrastructure

Along with the agricultural extension service, Gabon's road network has deteriorated since independence. The Libreville-Ntoum road, paved ten years ago, is a muddy mess today in the rainy season. True, a certain number of bridges have been built to replace ferries. But it is the unanimous opinion of the team that the physical difficulty and cost of road transportation represent major obstacles to agricultural development, both large-scale and traditional, and the single step the GOG could take which would have the greatest impact on the agricultural sector would be to improve the country's roads.

The Transgabon railroad, presently under construction, while intended primarily to serve the mining sector, is bound to have a major impact on the agricultural economy as well. This is particularly true for the Franceville region with its burgeoning agro-industrial blocs, in the sense that input

deliveries from the coast and marketing of output in Libreville will both be facilitated.

Another very important form of transport, particularly in the Estuaire, Ogooué Maritime, and Nyanga provinces, is boat. Port-Gentil is supplied largely by boat and pirogue (dugout canoe). The country has a large fleet of pirogues powered by outboard motors.

Finally, transport of food by air occurs also.

Marketing and Pricing

The marketing of agricultural products in Gabon at the present time is haphazard. In view of the state of the transportation system, this is not surprising. What is marketed is not distributed through any organized network, but rather through the generally unscheduled activities of a number of small, independent operators.

Institutional arrangements for marketing have varied over time, and are still varying. The early role of the Sociétés de Prévoyance has been mentioned. For coffee and cocoa, a mixed system involving guaranteed producer prices and parastatal marketing organizations appears to function smoothly and well. The crops are purchased by means of special funds (the Caisse de Stabilisation des Prix du Café and the Caisse de Stabilisation des Prix du Cacao), which are governed by Comités de Gestion, placed under the authority of the Ministry of Economy and Finance, which sets prices. The crops are purchased directly from smallholder producers, and the parastatals contract for transport, either with private haulers or government transport.

In the marketing of staple foods, Gabon has had a less happy experience. In the 1970's, a para-statal, the Office National de Commercialisation Agricole (ONCA) had authority to market staples. In the case of groundnuts, which were once an important cash crop in the Lébamba area, ONCA operated by means of a system of chits, with payment being honored frequently one year late. ONCA was abolished. In the Lébamba area, private trade took over. But this was abolished

by government decree in the spring of 1980 (the harvest is in January), and the marketing monopsony given to an organization named CODEV. CODEV apparently did no purchasing or transporting, and therefore stocks of groundnuts accumulated in farmers' houses, causing considerable resentment in the area.

For manioc and taro, private Senegalese truckers based in Lébamba operate with 8-ton trucks, visiting weekly markets and purchasing from farmers at prices supervised by village chiefs and chairmen of local party committees. The traders load the purchased manioc and taro into sacks and haul it for sale in Libreville.

Similar marketing problems have been encountered by the Ntoum plantain plantation and by the Chinese rice projects in Nyanga province, where contractual marketing arrangements fell through and caused problems of disposal of production.

It was estimated by a person competent in the field that fully 40 to 60 percent of the manioc crop is never harvested because of the lack of a workable marketing system. Manioc flour (fou-fou) is imported from neighboring Cameroon and Congo.

Aside from coffee and cocoa, there appears to be no producer price policy at all in agriculture.

Administrative Structure

The Ministry of Agriculture, Waters and Forests, Livestock, and Rural Development of the GOG is housed in the Prime Minister's office in Libreville and in several other buildings scattered around town. According to the ministry's organigram, the Director General of Agriculture, who is placed under the Minister, controls the work of functional divisions of the ministry, and also the territorial units, which are known as the provinces agricoles (agricultural districts). The territorial representatives, known as chefs de province agricole, and their staffs report directly to the Director General Agriculture.

On paper at least, the ministry has to do with all aspects of agriculture in Gabon. With such a large mission, the ministry is woefully understaffed and underequipped. At the central level, the ministry lacks even the capability to design any agricultural project; for this it relies on expatriate technicians working in the ministry and on visiting consultants. The personnel of the ministry at the provincial level and below are few and far between, and lack the means to travel outside the towns where they live.

In fact, however, the entire modern agriculture sector whose development is being entrusted to the agro-industrial blocs falls outside the purview of the ministry. This sector operates under the control (sous la tutelle) of the ministry, but since each agro-industrial bloc has its own staff (often recruited among expatriate technicians), this sector resembles a quasi-private sector completely independent of the ministry.

The fact that the Director General of Agriculture is simultaneously Chairman of the Board of several of the biggest agro-industrial blocs (AGROGABON, SONADECI, OGAPROV) complicates matters further. The ministry's personnel in the provinces, not unnaturally, resent the fact that priority in allocation of scarce resources is given to the agro-industrial blocs, from which they are excluded, whatever may be said in Libreville about the need for rural development. They acquire neither prestige nor motivation thereby. The questionability of the ministry's ability to perform in the provinces is, therefore, far more than a matter of equipping every chef de province agricole with a Land Rover.

Training

The lack of trained Gabonese personnel is often used as an argument in Libreville for the soundness of the decision to rely primarily on the agro-industrial blocs with their foreign experts to increase production in agriculture. It is a strong argument as far as it goes. Yet it is debatable whether relegating a weak ministry to playing a secondary role to high-cost,

expatriate technicians represents a sure way of developing Gabon's agriculture, rather than a sure way of perpetuating a dependence on foreigners. A parallel situation exists, incidentally, in the field of education, where the poorly-paid, ill-housed Gabonese teacher, when he can be found at all, is at disadvantage compared to the highly-paid, well-housed teacher from France or another African country.

Moreover, the structure of Gabonese economy and society as they exist today actually devalue the skills most needed for food production. For instance, in the civil service, mechanics are underpaid in relation to office workers. The skills of the former are in short supply in agriculture, whereas those of the latter are not.

In an effort to break the vicious circle of underdevelopment linking lack of trained technicians to foreign dependence and back to lack of training, the GOG has revived the old agricultural training school at Oyem, with UNDP support. This effort has so far failed to have much impact. Reports received from users of the initial batch of trainees are generally negative, with some reports of absenteeism and thievery, showing distinct lack of motivation. Nevertheless, the effort to train cadres (including women) deserves the strongest possible encouragement.

What Type of Production?

The question of how to combine the very real resources (investment funds, suitable land, hard-working people) at the GOG's disposal is at the heart of the government's dilemma over what course to follow in stimulating production in an agricultural sector that is officially recognized to have been severely neglected for years past. The appropriate course can only be determined by taking into account all the relevant factors and constraints.

The high cost of wage labor has led GOG planners to design projects of a type (the agro-industrial blocs) that is extremely capital-and technology-intensive, and sparing in the use of labor. This is good economics. However, the actual

production potential of such a course is limited at the outset by real constraints of the physical environment and limitations of the existing knowledge of it. Land clearing operations, where feasible, are very expensive. 9/ Some of the projects fit into relatively restricted niches where soil and topographic conditions are favorable for growing a particular crop or raising a particular form of livestock.

Secondly, even where they conserve on manpower by heavy use of machinery, such projects require heavy expenditures, not only in the initial investment in plant and equipment, 10/ but in purchased inputs for operation. The high yields per hectare which are counted upon to justify the heavy expenditure can only be obtained if timely supplies of chemical fertilizers, pesticides and herbicides are assured. Even under the best of conditions, deliveries to the project area are far from reliable, and when a serious disease problem arises (such as in the case of the black fungus at Ntoum) getting hold of the appropriate product from foreign sources becomes critical.

Thirdly, even acquiring the necessary initial plant and animal materials to establish the project is no easy task in Gabon. Two examples will suffice. In the establishment of the Ntoum plantain plantation, the project was based on the assumption that 5,000 rootstocks would be imported from Cameroon where they were plentiful. When the time came, however, it was discovered they were not available. Plans had to be rapidly changed, and the plantation manager spent several weeks driving around the countryside collecting rootstocks from local farmers. From an initial planting of a few hundred, the plantation has gradually been expanded, and today, three years after its establishment, it covers 80 of a planned 300 hectares.

9/ CFAF 1 million per hectare in the case of the Ntoum plantain plantation.

10/ Rural engineering works in Gabon are estimated to be three times as costly as similar works in Ivory Coast.

For cattle ranching, the acquisition problem is even more serious. Gabon virtually lacks cattle. Any ranching project thus requires bringing an appropriate animal supply into the country. Because of the need for quarantine, it is usually necessary to fly the animals into the project area. From sources of supply in Senegal or Zimbabwe, the cost of this transportation is about CFAF 130,000 per head. 11/

In the absence of a protectionist policy, the high-cost agro-industrial bloc projects face the constant threat of competition from cheaper imports. This applies particularly to rice and meat. Moreover, their labor costs are likely to continue to escalate unless the GOG takes drastic action to hold down the SMIG, which it has shown no sign of taking up to now.

The Ministry of Plan, as noted, counts on the agro-industrial bloc projects to provide a "spread effect" in the surrounding countryside (the opérations zonales intégrées). It is true that Gabonese farmers have been shown to imitate production in cases where they can count on a profit from sale. Around the Ntoum plantain plantations, for example, numerous clearings in the forest have sprung up with plantains, often using rootstock material from Ntoum. This development may, however, be largely a result of a perceived marketing opportunity for a crop with which people are already familiar and for which there exists a demonstrated demand.

Indeed, the demonstration value of the agro-industrial bloc projects is questionable, since African farmers cannot duplicate the mechanized, chemical-intensive methods of land clearing, soil preparation, planting, weeding, and harvesting used by these projects. One notes, a fortiori, that the managers of such projects often have great difficulty getting hold of the necessary machinery parts, chemical products, and other essential inputs on time, even with the benefit

11/ Actual cost incurred by OGAPROV. This compares with a purchase cost for the same cattle of CFAF 120,000 per head.

of their two-way radios, their telex to Europe, and their airfreight networks.

On the other hand, a decision by the GOG to give priority to a rural development policy, a course which offers a certain attractiveness to government planners because it would get around the need to pay wage laborers the high minimum wage, is constrained in application by the large and growing differential between the potential income to be earned by employment in the mining and industrial sectors and that expected by smallholders from production and marketing of their cash crops. Such a rural development policy would therefore be nearly as costly as the agro-industrial bloc policy and would run the risk of producing disappointing results. In particular, it almost certainly would not arrest the flow of young people from the countryside to the cities unless it were accompanied by a major effort on the part of the GOG to make rural life generally much more attractive.

THREE EXAMPLES OF PROJECTS

Three agricultural projects in various stages of design and implementation give an idea of the state of agricultural development in Gabon at the present time. 12/ The rice project at Ndendé is in the initial stages of implementation under the management of a para-statal. The peanut project at Lébamba is still in the planning stage under the management of the Ministry of Agriculture. Finally, the cattle ranching projects at Nyanga and Lékabi are under feasibility study and the GOG is anxious to find sources of private investment to finance them.

Rice

Although there apparently is some tradition of upland rice cultivation in the Tchibanga region, rice is not widely cultivated at the present time in Gabon and total production represents much less than 10 percent of the consumption needs of the country. The demand for rice in urban areas has soared, and the GOG is anxious to find ways of meeting a portion of this demand from domestic production.

12/ Technical details of these projects are available for consultation from the study mission.

In its quest for domestic rice production, the GOG faces a dilemma. Encouraging upland rice production in the conditions of Gabon is evidently not a viable proposition, given the lack of experience of traditional farmers with the crop and the fact that rice does not enter into their diet in a significant way. Implanting the cultivation of irrigated rice, therefore, poses the choice of the method to be followed: labor intensive or capital-intensive. Experiments are going on with both methods.

Two rice demonstration projects at Tchibanga and Nyali, both in Tchibanga Province, were started about 1965 when Chinese specialists from Taiwan began showing local farmers how to grow rice on small paddy fields using the hand-transplanting method and simple hand tools. The projects were subsequently taken over by Chinese specialists from the mainland, who continue to fill the role of cadres (7 at Tchibanga, 12 at Nyali). The Chinese work with farmers' cooperatives at each location (108 member families at Tchibanga, somewhat fewer at Nyali); the farmers do not live in the cooperative, but come to work the fields from as far away as 2 kilometers. These projects represent the labor-intensive method of rice cultivation. Yields, using improved varieties like Chianan 8 and growing two crops per year, are in the range of 3-4 tons per hectare per crop. All inputs are furnished, and marketing the surplus presents major problems.

Not far from Nyali, at Ndendé, is a Japanese rice project which is just getting under way. Implemented by Nippon Koei Co., Ltd., of Tokyo under contract with SONADEC, the project represents the GOG's hope of using capital-intensive methods of breaking the rice production bottleneck. The project so far covers only 5 hectares of a planned 500 hectares and is still in the initial trial stage.

The feasibility study 13/ contains a rather thorough evaluation of the climate,

13/ Feasibility Report on the Ndendé Rice Cultivation Development Project.
Nippon Koei Co., Ltd. Tokyo, Japan, 1978 (2volumes, English)

soils and water resources of the project area. It describes in detail the proposed technology for land development, crop production, harvesting and processing. Detailed lists and cost estimates of required manpower machinery, infrastructure, and production inputs (fertilizers, pesticides, herbicides, etc.) are included in the study.

The study concludes that about 740 hectares of the area surveyed are suited for rice. However, certain important environmental conditions unfavorable to rice production are recognized. These are high humidity which favors the development of rice blast disease, and low incidence of solar radiation during the rainy season, which limits photosynthesis in the rice plant and thus limits yields.

Thirty-six varieties from IRRI were tested at Ndendé in 1978 and '79. Five varieties - IR-20, IR-34, Chianan 8, BG 90-2, and CICA-4-were selected for use on the project.

Plans are to mechanize the project, to the extent feasible, using machinery of appropriate size and performance characteristics. Land preparation will require light bulldozing of small trees and shrubs, plowing, harrowing, levelling, and application of lime and fertilizers according to soil tests on pilot farms. Seeding will be by drilling or broadcasting on dry soil, or by hand broadcast of seedlings germinated in a seedling box. Irrigation will be carefully controlled in timing and amounts of water in accordance with rice requirements for highest yields and control of weeds.

The rice crop will be harvested using 100 HP combines. In view of the high humidity, the paddy will require drying in a fuel fired rice dryer.

The total estimated cost of the project is the equivalent of \$11,195,000. This works out to about \$22,600 per hectare for the 500-hectare project. Since actual costs are more likely than not to escalate, it appears to the mission that the project will be very expensive and its economic viability uncertain.

Peanuts

Peanuts are a traditional crop in the Lébamba area of Ngounié Province, where they were grown for home consumption and for cash sale. The area possesses two distinct advantages in comparison with much of the rest of Gabon: first, a combination of fertile soils and good climate (average annual rainfall: 1,600-1,900 mm.), and secondly, a fairly dense population, providing a good supply of labor for agriculture, even today. While peanuts are still grown for home consumption, however, a series of bad experiences with government marketing interventions has just about dried up the supply for cash sale.

The GOG is very interested in establishing in the Lébamba area one of the agro-industrial blocs on which it is counting to reverse the recent trend of declining agricultural production. In view of the tradition of peanut growing in the area, the GOG's plans for establishment of an agro-industrial bloc also comprise plans for an integrated zonal operation in which peasant farmers would be associated with improved production methods on small-scale farms from an early stage of the project (Phase II).

Earlier extension efforts in smallholder peanut production were essentially abandoned in 1968 when marketing problems and the rural-urban exodus appear to have overtaken the gains to be made by perfecting cultivation practices of an unprofitable crop. The organization that had carried on the extension effort, the BDPA, was persuaded to return in the early 1970's to try to design a project based on a slightly higher level of mechanization; the result of these efforts was a feasibility study consulted by the mission in the course of its stay in Gabon. 14/

The results of the experiments with mechanization appear to have been inconclusive. This provides a vivid illustration of how lack of basic research results on everything from crops to machinery in Gabon conditions hampers progress

14/ BDPA, "Etude d'un Projet de Production d'Arachides en Exploitation Semi-mécanisée". Paris: May 1974.

in project design. The GOG's decision to try to interest the United States in peanut production stems from an assumption that American experience with mechanized peanut production can be transferred bodily to Gabon. The correctness of this assumption, unfortunately, has yet to be demonstrated.

IRHO in 1975 and 1976 conducted peanut variety trials and identified adapted varieties, determined fertilizer requirements, including the need for calcium and magnesium, and found that a fungicide treatment was necessary to control leaf disease (cercospora in particular).

An updated feasibility study of the Lébamba peanut project, also consulted by the mission, significantly alters the character of the project in that it makes it into an integrated rotational crops-livestock project. 15/ The enterprises envisaged include production of peanuts for oil and table, including a mill for oil pressing, of corn, of soybeans, of rainfed rice, and of forage crops. There are to be three phases of the project: Phase I would consist of a 38-hectare seed farm; Phase II of a 100-hectare agro-industrial bloc plus a 100-hectare integrated zonal operation; and Phase III a 10,000-hectare extension of both these operations.

The project is very ambitious, particularly in its Phase III. The scale of the project, however, has been dictated to some extent by the fact that the GOG has already purchased a complete oil pressing mill with a capacity of 800 tons per year, which, translated into peanut production terms, means 2,000 hectares of peanuts per year. Since in the crop rotations suggested by BDPA peanuts were to occupy from one-sixth to one-third of the area cultivated annually, this implies that the total project area would have to be between 6,000 and 12,000 hectares to operate a full capacity. The oil pressing mill is at present still uncrated, awaiting the appropriate agricultural production to put it to work.

15/ A. J. Gestin, "Le Développement Agropastoral de la Zone de Lébamba; Mise au Point et Expérimentation de Structures Modèles", Rome: FAO, 1980.

The FAO feasibility study notes that the BDPA never actually carried out field tests of its suggested rotations, relying instead on the assumed similarity of conditions at a site some 600 kilometers away. Such an assumption would not seem to be adequate to serve as the basis for planning an agricultural project. The FAO study suggested replacing the BDPA rotation of three years of food crops followed by three years of forage crops by the following rotations:

	<u>1st Cycle (November sowing)</u>	<u>2nd Cycle (January)</u>
First year	Peanuts	Upland rice
Second year	Corn	Soybeans
Third year	Forage crops	Forage crops
Fourth year	Forage crops	Forage crops

Although no trials of these rotations have yet been made, the savanna areas in the Lébamba region represent a relatively favorable natural environment which, when coupled with the relatively dense population and the tradition of raising peanuts, constitutes a better starting ground for making the transition from subsistence cultivation to commercial farming than the rainforest. In the rainforest, as seen around Ntoum, traditional agriculture (slash and burn) depends on clearing the forest to plant crops for two years in succession, after which the forest is usually allowed to regenerate for 35 years. In these conditions, the problem of making the transition is obviously great, even on relatively gentle slopes where water erosion would be a manageable problem.

The agronomic problem at Lébamba becomes one of restoring soil fertility by replacing organic matter after clearing and planting. Thus the proposal for devoting at least half the rotation to leguminous crops for forage has sound reasons behind it.

Although the area appeared to be generally favorable for feeding cattle (with the usual caveat about tsetse fly infestations, a question needing further research), the FAO report notes that no study has ever been made of the suitability of the project area for cattle raising in spite of the fact that there was a

proposal to devote half the crop area to forage crops and to produce one thousand tons of peanut meal per year as a byproduct. The FAO specialists assigned to the project, who have not yet arrived on site, will no doubt have more to say about the matter of cattle adaptability.

An interesting aspect of this project is that the GOG has apparently made a conscious decision to entrust the project management directly to the Ministry of Agriculture, rather than farming it out to one of the para-statal organizations as in the case of the other planned agro-industrial blocs. This appears to the mission to be a sign that there are at least some second thoughts within the GOG about the advisability of putting all its eggs in the basket of the para-statals. Whether the Ministry of Agriculture, however, can mobilize a sufficient number of properly trained Gabonese to staff the project remains to be seen; for the moment, at least, the expatriate FAO specialists are being counted on to carry the major share of the burden of starting up.

There are also questions which arise regarding the economic feasibility of the project. The agro-industrial bloc part of the project will have to produce peanuts at a very low production cost in order to compete effectively against peanut oil at present being imported from Europe and refined in a refinery located at Lambaréne. The present price of peanuts in Gabon is CFAF 65 per kg.

Perhaps more hope is offered by the integrated zonal operation side of the project. If successful, this part of the project stands a good chance of being able to revitalize a stagnant agricultural situation and thereby provide income and purchasing power to a relatively significant population. In this connection, the Peace Corps was approached by the GOG to help organize an extension scheme involving introduction of new peanut varieties, better farming practices, and mechanized labor-saving devices. The Peace Corps project plan, dated July 1980, states notably:

In light of these circumstances, the problem presented to Peace Corps must be viewed as twofold: to improve the standard of living of the rural people in the Lébamba district; and of even greater importance, to provide the GOG with an alternative development model, one which builds on the traditional farming sector and, in so doing, allows rural people to participate fully and share in the economic growth and prosperity of the country.

The Peace Corps project plan also recognizes the fact that traditional peanut production is carried on in the Lébamba area by women, and so an extension effort in peanut production, to be effective, must be directed primarily to women.

Livestock

Gabon is presently importing about 10,000 tons of beef annually. This is estimated, in terms of equivalent offtake, to equal maintaining a cattle herd of some 335,000 head, under Gabon conditions of production. Import needs, if present consumption trends continue, are estimated to be 22,000 tons by 1990. At the present time, Gabon has virtually no cattle, no tradition of cattle raising, and a record of failure where attempts at commercial cattle raising have been made. Nevertheless, the GOG is embarking on several large-scale cattle ranching projects, and at least one group of private investors has conducted its own feasibility study and is actively looking for capital for a cattle venture.

According to a 1975 census, there were 2,427 head of cattle in the country at that time. By 1980, this number should have increased to about 3,000 to 3,500. The bulk of these cattle are located in the Franceville area (Mounana Ranch: 12,000 hectares, 900 head; Presidential Ranch: 5,500 hectares, 1,100 head). Two new ranching operations are planned, one in the Nyanga valley (89,400 hectares, 29,400 head in 10 years' time), the other at Lékabi near Franceville (66,700 hectares, 12,900 head in 10 years' time), both to be managed by AGROGABON. 16/

16/ J. Van Lancker, Dossier préliminaire d'exécution: Ranches d'élevage bovin de la Lékabi et de la Nyanga; AGROGABON, Note de présentation: Programme en vue de la création de deux ranches d'élevage bovin, 1978.

Ranching operations in Gabon are limited by two factors: the availability of suitable land and tsetse fly infestation. Only about 15 percent of Gabon is open land, the rest is covered by forest. The whole country is situated within what is referred to in Africa as the tsetse belt. However, it appears that existing tsetse fly distribution studies are not detailed enough for this part of Africa to obtain a realistic picture for a given location. There may be pockets with little or no infestation. On the other hand, low or absent infestation may be due to lack of suitable hosts for the fly, which needs cattle or wild game to sustain a population; at this time, game populations have been reduced considerably by hunting, and cattle are virtually non-existent. One can only speculate what the fly population will be once a large cattle population becomes established in an area. Existing plans to extend ranching operations to new areas appear to treat potential tsetse fly problems somewhat casually. They depend very much on so-called "trypanotolerant" breeds to overcome the danger.

As can be expected when raising cattle in the tropics, a host of other health problems need constant attention. While they will not totally frustrate ranching operations, they are apt to affect output and profitability. The situation is not improved by the total absence of veterinary diagnostic facilities in the country. Any help in coping with a health problem, if sought at all, has to come from outside.

Nevertheless, projections call for a fertility rate of 80 percent, resulting in a yearly calf crop of 70 percent with a calf mortality rate of 2 percent. This is to be achieved with a stocking rate of five head per hectare, with a three-month breeding season at a rate of one bull for 20 cows. The breed of choice is the trypanotolerant N'Dama. This breed is supposed to yield carcass weights of 180 kgs. at 4 years of age, dressing out at about 50 percent.

Concerning the availability of land, it appears that there are more areas available than those taken up by the present and planned ranching operations. Especially to the east of Franceville, towards the Congo border, are vast stretches of open, prairie-like grassland on rolling hills which, on first sight, look good for cattle grazing. Locals, however, speak of two species of poisonous grasses, and of cattle dying from unknown causes. Obviously, this would need further investigation. Other open land seen near Franceville and in the Tchibanga region, while more of the savanna type with good grass cover, but also a lot of woody shrub vegetation, appears potentially suitable for cattle grazing under careful land management. Much is made of improving grazing land by growing stylosanthes, an alfalfa-like legume.

CONCLUSIONS

It is obvious that agricultural development in Gabon faces many problems. For a long time officially disadvantaged, the agricultural sector at last appears to be coming into its own as an area for attention by government planners attempting to create a viable national economy. The dilemma which now faces the GOG is one of how best to develop the country's production resources in this sector.

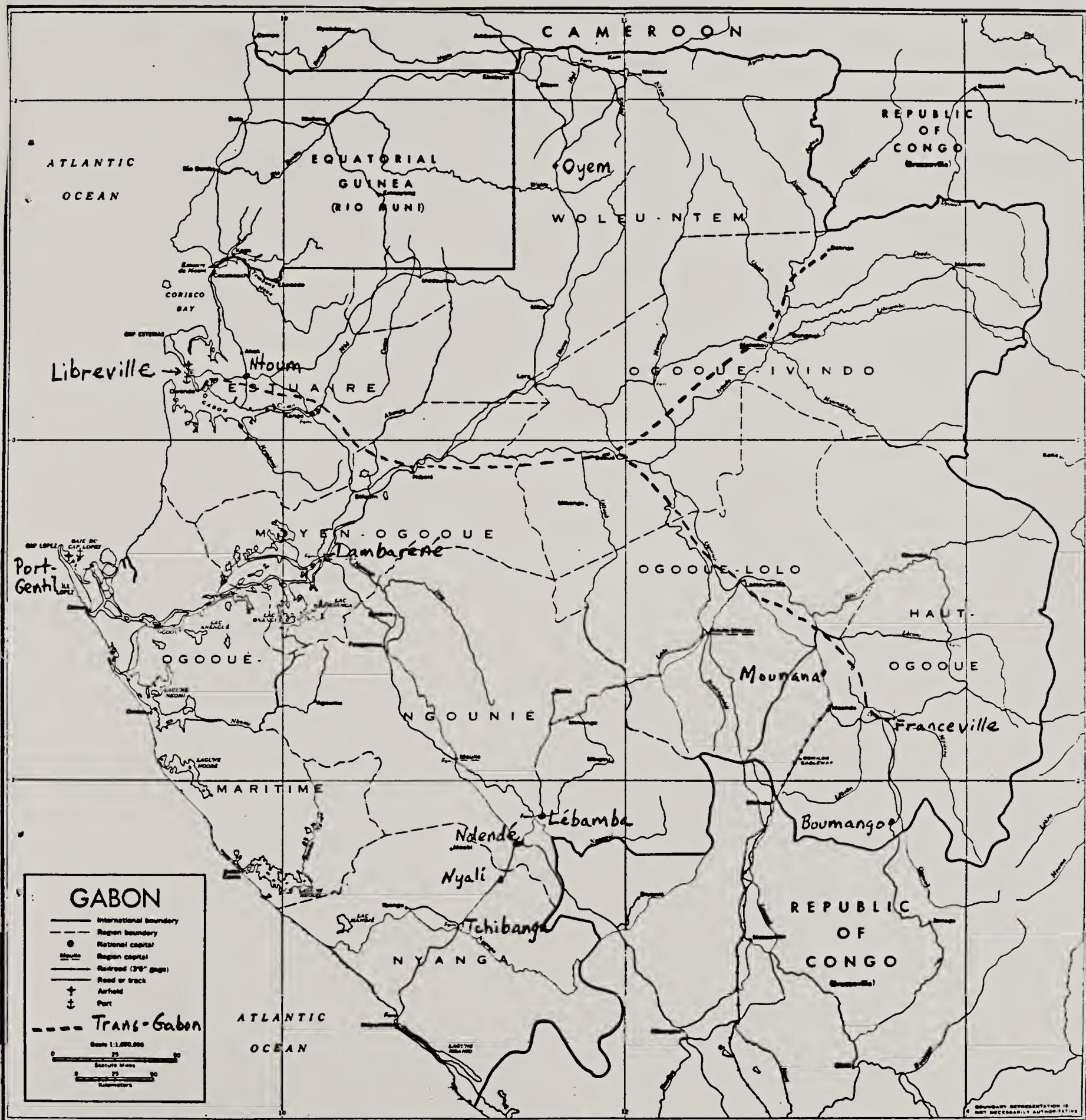
At the present stage, development and policy actions by the GOG outside what is specifically the agricultural sector are likely to have as large an impact on raising agricultural productivity as those taken within the sector. This observation applies most particularly to the marketing of agricultural products, which is one of the weakest links in Gabon's agriculture at present. The channeling of development funds into road-maintenance and improvement would have a major impact on facilitating transport of products which can be produced domestically but which are currently imported. In addition, the enactment of pricing policies to shift the terms of trade in favor domestic production would provide the necessary incentives to Gabonese producers (and, eventually, foreign investors in the agricultural sector).

The immediate needs for agricultural development in Gabon can be identified as: 1) training agricultural personnel, both of the technical and the planning kinds; 2) upgrading the very thin agricultural research base; and 3) coordinating a major planning effort in rural development. These needs will only be met, however, if the GOG makes a decision at the highest level that such an effort will be worthwhile in supplementing the production potential of the agro-industrial blocs which are currently receiving priority treatment. It remains to be seen whether the GOG will be farsighted enough to take steps to meet these needs now, while it has at its disposal the financial resources to do so.

List of Acronyms and Abbreviations

AGRIPOG	Société Agricole de Port-Gentil
AGROGABON	Société de Développement de l'Agriculture et de l'Elevage au Gabon
BDPA	Bureau pour le Développement de la Production Agricole
CECA-GADIS	(import-export firm)
CFAF	CFA Franc
CIAM	Centre d'Introduction, d'Adaptation et de Multiplication de Matériel Végétal, Vivrier, et Fruitier
CNSS	Caisse Nationale de Sécurité Sociale
CODEV	(import-export firm)
FAO	Food and Agriculture Organization
IITA	International Institute of Tropical Agriculture
IMF	International Monetary Fund
IRAT	Institut de Recherches Agronomiques Tropicales et des Cultures Vivrières
IRHO	Institut de Recherches pour les Huiles et Oléagineux
OGAPROV	Office Gabonais d'Amélioration et de Production de Viande
ONCA	Office National de Commercialisation Agricole
OPEC	Organization of Petroleum Exporting Countries
ORSTOM	Office de la Recherche Scientifique et Technique d'Outre-Mer
PDG	Parti Démocratique Gabonais
SATEC	Société d'Aide Technique et de Coopération (Paris)
SIAEB	Société Industrielle Agricole et d'Elevage de Boumango
SODECI	Société de Développement des Cultures Industrielles (Paris)
SOGADI	Société Gabonaise de Distribution
SONADECI	Société Nationale de Développement des Cultures Industrielles
SOSUHO	Société Sucrière du Haut-Ogooué
UNDP	United Nations Development Program

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